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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,956	03/09/2006	Wilhelm Tobben	14069-00001-US	3706
23416 7590 03/04/2009 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
EXAMINER				
JACOBSON, MICHELE LYNN				
ART UNIT		PAPER NUMBER		
1794				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/567,956

Applicant(s)

TOBBEN ET AL.

Examiner

MICHELE JACOBSON

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 6 and 9-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6 and 9-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/12/08 has been entered.

Examiner Notes

2. Any objections and/or rejections made in the previous action, and not repeated below, are hereby withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 6 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshiaki et al. European Patent Application Publication 920808 (hereafter referred to as Toshiaki) and Turbak et al. U.S. Patent No. 3,833,022

(hereafter referred to as Turbak) and Sears et al. U.S. Patent Application Publication No. 2002/0000683 (hereafter referred to as Sears).

5. Toshiaki teaches that fibrous casings are preferred for sausage such a casing has good appearance and can produce an image that the sausages are of high quality. (Para. 2) Polyamide films such a polyhexamethylene adipamides which are employed as synthetic plastic casings are advantageous in that they give some smoking effect under high humidity conditions, that they have high tensile strength at break, high impact strength, excellent dimensional stability and excellent oxygen barrier properties. (Para. 3) However, the smoking effect achieved with polyamide films is very small compared with those achieved by fibrous casings. (Para. 3) By the addition of 0.1 to 10% by weight of cellulose powder to a polyamide/cellulose acetate propionate sausage casing its smoking performance is improved and the resulting casing has a matted and grained uneven surface which gives the impression that the encased product is of high quality. (Para. 12) As the polyamide PA6, PA6/66, PA11, PA12, PA6/12 and mixtures thereof are used. (Para. 11)
6. The film of the invention can be subjected to biaxial orientation stretching to about 1.0-3.5 fold in both directions. When the casing is immersed in a 95° C hot water bath for 30 seconds it shrinks by 1 to 30% in both directions so that the casing material remains in intimate contact with the contents even after the smoked product is cooled thus giving a crumple-free final cased product. (Para. 14)
7. The water vapor permeability for an example casing of the invention (example 2) comprising 75% polyamide to which cellulose acetate propionate and cellulose powder

had been added is recited to be $293 \text{ g/m}^2\cdot\text{day}\cdot\text{bar}$ ($\text{cm}^3/\text{m}^2\cdot\text{day}\cdot\text{bar}$). (Table 1) The thickness of this casing is recited to be $40 \text{ }\mu\text{m}$. (Para. 20) Comparative example 2 comprising a $40 \text{ }\mu\text{m}$ film composed of biaxially stretched PA6 resin was recited to have a water vapor permeability of $112 \text{ g/m}^2\cdot\text{day}\cdot\text{bar}$. (Para. 22, Table 1) The depth of the smoked skin for example 2 and comparative example 2 were recited to be 2 mm and 0.5 mm respectively. (Table 2)

8. Toshiaki is silent regarding the disposition of the recited casing in a multilayer film.

9. The examiner takes official notice that it is well known in the sausage casing art to utilize films with multiple layers in order to benefit from the different properties different types of layers can provide. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the film produced by the combination of Toshiaki in a multilayer film.

10. Toshiaki is silent regarding the length of the cellulose fibers within the cellulose powder recited.

11. Turbak teaches that improved synthetic sausage casings can be made by adding fibrous filler material to the material that is employed to form the casing. (Col. 2, lines 51-55) The filler material may be cellulosic and have an average length of between 40 and $110 \text{ }\mu\text{m}$. (Col. 2, line 56, Col. 3, lines 31-32) The fibrous material is recited to increase the modulus of the casing produced. (Col. 3, lines 4-10)

12. Both Toshiaki and Turbak are directed towards sausage casings. The stuffing of sausage meat into casings necessarily produces strain on the casing and therefore

higher modulus casings that would be less likely to deform or break would be obviously desirable to those of ordinary skill in the art. One of ordinary skill would have been motivated to substitute the cellulose fibers recited by Turbak for the cellulose powder recited by Toshiaki in order to increase the modulus of the sausage casing produced while preserving the desirable smoking properties provided by the presence of cellulose based material in the casing. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used cellulose fiber instead of cellulose powder in the invention of Toshiaki.

13. The combination of Toshiaki and Turbak is silent regarding a means for disposing cellulose fibers in polyamide.

14. Sears teaches improved composites containing cellulosic pulp fibers dispersed in a matrix, wherein the matrix comprises a polymeric material and said cellulosic pulp fibers comprise greater than 1% and less than 60% by weight of the composite. (Para. 16) Suitable polymeric material includes polyamides, specifically nylon 6, nylon 12, nylon 66 or mixtures thereof. (Para. 24, 25) The granulated cellulosic fibers typically have an average length of between 0.1 and 6 mm (100-6000 μm) An advantage of the composition recited is the reduced discoloration in the resultant composite. Prior use of pulp fibers typically resulted in substantial or severe discoloration of the final product. This discoloration is significantly reduced or avoided using the composition of the invention. (Para. 31) One surprising advantage resulting from the invention was the ability to melt blend the polymeric material with pulp fibers at lower temperatures than

the melting temperature of the polymeric material. (Para. 44) The composition of the invention is recited to be useful for melt extrusion. (Para. 45)

15. Having established the desirability of disposing cellulose fibers in the polyamide sausage casing of Toshiaki, one of ordinary skill would have turned to the teachings of Sears. Toshiaki, Turbak and Sears are all related to polymeric materials, and one of ordinary skill in the polymeric sausage casing art would have been expected to rely on the teachings of the polymeric arts since these types of structures comprise polymeric materials. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the teachings of Sears to provide a cellulose fiber reinforced polyamide composition for substitution of the cellulose powder polyamide layer recited by Toshiaki as suggested by Turbak. The production of a multilayer casing of such a composition would have been the same as the invention claimed in claims 1, 3, 6, 9 and 10.

16. Regarding claims 11-13: The thickness of films is well known to affect their permeability. In the sausage art it is well known that depending on the sausage being manufactured different levels of water permeability are desired. For example, the water permeability of the casing for a dry sausage that is being cured is desired to be high in order to prevent the formation of jelly between the sausage and the casing and to facilitate the curing process. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the thickness of the casing recited Toshiaki depending on the type of sausage being encased. This optimization of

a result effective variable would have resulted in a casing with the thicknesses recited in claims 11-13.

17. The combination of Sears and Toshiaki is silent regarding the area stretching ratio and degree of reshrinkage of the sausage casing film.

18. Regarding claims 14 and 15: Since the composition taught by Sears is the same as that taught by applicant (same polyamides, substantially overlapping percentages of cellulose fiber (1-60% for Sears compared to 0.1-70% for applicant), it is the examiners opinion that the area stretching ratio and degree of reshrinkage of the sausage casing film recited in claims 14 and 15 would be inherent to the sausage casing comprising the film taught by Sears.

Response to Arguments

19. Applicant's arguments filed 12/12/08 have been fully considered but they are not persuasive.

20. Applicant has asserted on pages 5 and 6 that the teachings of Sears are effectively not analogous art and related to "a totally different technical field compared to the present application". Applicant further states on page 8 of the remarks that "Sears is considered to be clearly inappropriate to be used by a person skilled in the art when dealing casings for foodstuff". However, it is the examiner's position that artisans working the field of producing *polymeric* sausage casings (such as those disclosed by Toshiaki, Turbak and applicant) are first and foremost *polymer* chemists, not merely butchers or sausage makers, and would therefore reasonably turn to the teachings available in the field of *polymer* chemistry. Applicant has asserted that because the

teachings of Sears are directed towards composites for use in injection molding one of ordinary skill would not have been apprised of their utility for other applications. However, this is not persuasive since those of ordinary skill in the polymeric arts understand that polymeric materials can find utility in a multitude of applications. As discussed above, one of ordinary skill would have been motivated by the utility of cellulose materials in sausage casings disclosed by Toshiaki and the utility of fibrous cellulose material in sausage casings to increase modulus disclosed by Turbak to incorporate fiber reinforced polyamide such as that taught by Sears.

21. Alternatively, *in arguendo*, if the examiner is persuaded that Sears is not included as part of the food stuff arts, one of ordinary skill in the sausage casing arts would still have turned to the teachings of Sears in order to provide a fiber reinforced polyamide as motivated by Turbak since the teachings of Sears meet a need identified in the prior art. MPEP 2141.01 I. states "'Under the correct analysis, any *need* or problem known in the field of endeavor at the time of the invention and addressed by the patent [or application at issue] can provide a reason for combining the elements in the manner claimed. " KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1397 (2007). Thus a reference in a field different from that of applicant's endeavor may be reasonably pertinent if it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his or her invention as a whole."

22. Applicant asserts on page 6 that "a person skilled in the art would be prevented from using the teaching of Sears to merely mix cellulosic material and polyamide, since

pure polyamide casings are not appropriate according to Toshiaki if smoke properties are an issue". This argument is not germane since polyamide mixed with cellulose fibers would not be *pure* polyamide as suggested by applicant. Applicant goes on to state that "there is no hint in Toshiaki to use the cellulose acetate propionate". This statement is complete contradictory to the entirety of the teachings of Toshiaki. Applicant's arguments at the bottom of page 6 of the remarks are disorganized and unclear and therefore not found persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794

Michele L. Jacobson
Examiner /M. J./
Art Unit 1794